WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a semiconductor substrate;

at least one isolation region buried insulating material in a trench formed in said semiconductor substrate;

a plurality of films in at least one part of a bounded area between said semiconductor substrate and said isolation region;

wherein said plurality of films comprises a silicon thin film and a silicon oxide film or a silicon oxynitride film, and

wherein said silicon thin film is nearer to said substrate than said silicon oxide film or said silicon oxynitride film.

2. The semiconductor device according to claim 1,

further comprising a silicon nitride film between said silicon oxide film or said silicon oxynitride film and said insulating material.

3. The semiconductor device according to claim 1,

wherein the semiconductor substrate comprises at least one germanium thin film layer or at least one semiconductor thin film layer including germanium in at least the vicinity of said isolation region from a surface of said semiconductor substrate to the bottom of the trench.

4. The semiconductor device according to claim 3,

wherein said semiconductor thin film layer including germanium is a silicon-germanium mixed crystal layer or a silicon-germanium mixed crystal layer doped carbon.

5. The semiconductor device according to claim 3,

wherein the semiconductor substrate comprises a plurality of germanium thin film layer or a semiconductor thin film layer including germanium.

6. The semiconductor device according to claim 3,

wherein said semiconductor substrate includes at least one other thin film layer or a part of the silicon substrate except said germanium thin film layer or said semiconductor thin film layer including germanium from the surface of said semiconductor substrate to the bottom of said trench.

7. The semiconductor device according to Claim 6,

wherein the surface of said semiconductor substrate comprises a silicon thin film layer.

8. The semiconductor device according to claim 7,

wherein said silicon thin film layer of the semiconductor substrate and in the trench is continuously formed.

9. The semiconductor device according to claim 3,

wherein said semiconductor substrate comprises a silicon-germanium on insulator (SGOI) substrate.

10. The semiconductor device according to claim 9,

wherein the bottom of said trench reaches a buried oxide film of said SGOI substrate.

11. The semiconductor device according to claim 1,

wherein said insulating material comprises a silicon oxide film, a silicon oxynitride or a silicon nitride or is made of two or more materials thereof.

12. The semiconductor device according to claim 1,

wherein said semiconductor substrate comprises a silicon on insulator (SOI) substrate.

13. The semiconductor device according to claim 12,

wherein the bottom of said trench reaches a buried oxide film of said SOI substrate.

14. A semiconductor device comprising:

a semiconductor substrate;

at least one isolation region insulating material in a trench formed in said semiconductor substrate;

a plurality of films in at least one part of a bounded area between said semiconductor substrate and said isolation region;

wherein said semiconductor substrate comprises at least one germanium thin film layer or a semiconductor thin film layer including germanium in at least the vicinity of said isolation region from a surface of said semiconductor substrate to the bottom of the trench.

15. The semiconductor device according to claim 14,

wherein the nearest film of said plurality of films to said semiconductor substrate comprises silicon thin film.

16. A method of manufacturing a semiconductor device comprising:

forming at least one trench in a semiconductor substrate;

epitaxially growing a silicon thin film at the bottom and on the side of said trench;

partially thermally oxidizing or partially thermally oxynitriding said silicon thin film in a thickness direction in an oxidizing atmosphere or in an oxynitriding atmosphere and forming a silicon oxide film or a silicon oxynitride film on said silicon thin film; and

burying an insulating film for isolating an element in the trench.

17. The method of manufacturing a semiconductor device according to claim 16,

wherein said semiconductor substrate includes at least one germanium thin film layer or one semiconductor thin film layer including germanium.

18. The method of manufacturing a semiconductor device according to claim 17,

wherein a step of said forming a trench includes

forming a pad oxide film and a mask nitride film on said semiconductor substrate, and

patterning said pad oxide film and said mask nitride film in a pattern of said trench and exposing a part of the surface of the semiconductor substrate.

19. The method of manufacturing a semiconductor device according to claim 18, wherein the surface layer of said semiconductor substrate is said germanium thin film layer or said semiconductor thin film layer including germanium; further comprising:

removing said pad oxide film and said mask nitride film by wet etching; and

epitaxially growing a silicon thin film at the bottom and on the side of said trench, and simultaneously epitaxially growing a silicon thin film layer on said surface layer of said semiconductor substrate.

20. The method of manufacturing a semiconductor device according to claim 16, further comprising:

forming a silicon nitride film on said silicon oxide film or said silicon oxynitride film between said steps of partially thermally oxidizing or partially thermally oxynitriding, and burying an insulating film.

21. The method of manufacturing a semiconductor device according to claim 16, wherein said semiconductor substrate is a silicon germanium on insulator (SGOI) substrate or a silicon on insulator (SOI) substrate; and

forming said trench until the bottom of the trench reaches a buried oxide film of said SGOI substrate or said SOI substrate.